CENTERS FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

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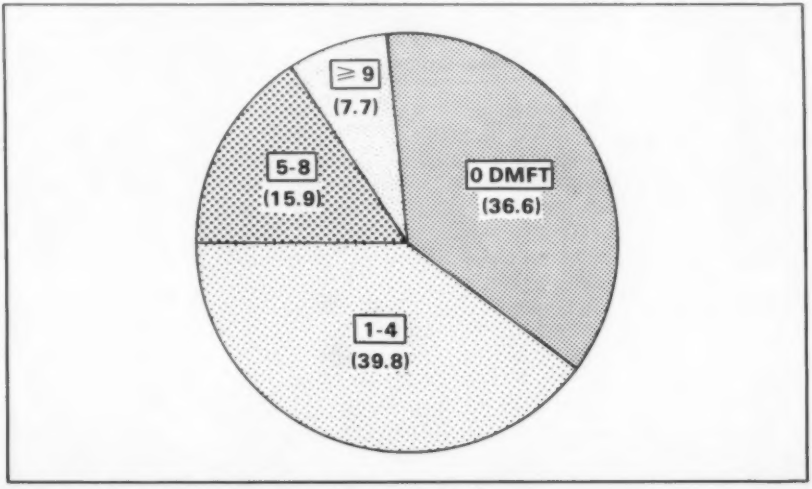
Perspectives in Disease Prevention and Health Promotion

Dental Caries and Community Water Fluoridation Trends — United States

One of the 12 fluoridation and dental health objectives identified in the U.S. Public Health Service's Objectives for the Nation (*1*) states: **By 1990, the number of 9-year-old children who have had caries in their permanent teeth should be decreased to 60%** (40% would be caries-free). In 1971-1973, 71% of these children had caries in their permanent teeth. The National Caries Prevalence Survey, conducted by the National Institute of Dental Research (NIDR) in 1979-1980 (*2*), reported that 49% of these children have had decay in their permanent teeth, demonstrating this objective has been achieved. The survey also reported that 89% of 17-year-olds have had dental caries (*2*). Although 37% of children aged 5-17 years were caries-free, approximately 24% of children in the same age group have had five or more decayed, missing (due to caries), and/or filled permanent teeth (Figure 1).

When the NIDR survey is compared with an earlier, similar survey by the National Center

FIGURE 1. Percentage distribution of children aged 5-17 years, by DMFT* status — United States, 1979-1980



*Decayed, missing (due to caries), and/or filled permanent teeth.

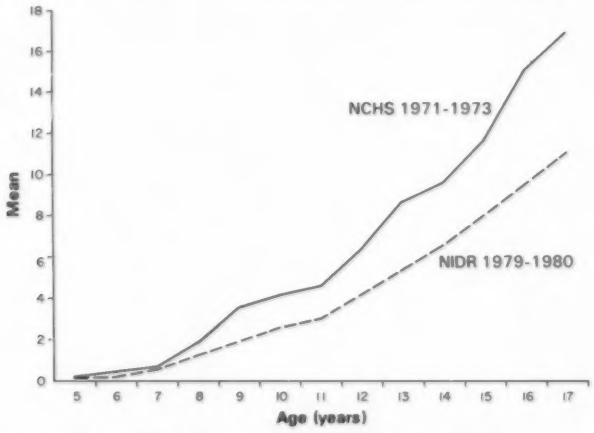
Dental Caries — Continued

for Health Statistics, the prevalence of dental decay among school-aged children appears to have been significantly reduced since 1973 (Figure 2) (*2,3*). The availability of fluorides from a number of sources, including community and school water fluoridation, fluoride tablets and drops, fluoride rinses and dentifrices, and clinically applied fluorides, have contributed to the decline in dental caries. It is difficult to attribute this decline to one specific modality, and the effects are not arithmetically additive. However, the combination of systemic and topical fluorides has contributed greatly to improved oral health in the United States. In 1985, approximately 20,000 employed adults and 5,000 older adults at senior citizen centers will be surveyed as part of an NIDR National Survey of Adult Dental Health. Oral health status and data on treatment needs from this survey will be available in 1987.

Although community water fluoridation remains the most effective and practical means of preventing and controlling dental caries, nearly half the U.S. population still does not have access to optimally fluoridated water. The optimal amount of fluoride necessary to reduce the most dental decay, with the least amount of risk of dental fluorosis (discoloration of the enamel), is 0.7-1.2 mg/l (0.7-1.2 parts fluoride per 1 million parts water) (*4*). Fluoride occurs naturally in most waters but usually at less than optimal levels. Since it is assumed that people in warmer climates drink more water than people in colder climates, the optimal level is lowest in the southernmost part of the United States. Therefore, the optimal fluoride level is calculated based on the annual average of maximum daily air temperature (*5*).

Since the introduction in 1945 of the practice of adjusting fluoride levels in community water systems, the number of people with access to water with dentally significant levels of fluoride (0.7 parts per million [ppm] or higher) has increased steadily to an estimated 123 million in 1983—approximately 52.2% of the total U.S. population (*6,7*). It is impractical to expect 100% coverage, because a portion of the population is not served by public water sup-

FIGURE 2. Mean DMFS* for children aged 5-17 years — United States†



*Decayed, missing (due to caries), and/or filled permanent tooth surfaces.

†From the 1971-1973 National Center for Health Statistics (NCHS) Survey and the 1979-1980 National Institute of Dental Research (NIDR) Survey.

Dental Caries — Continued

plies (approximately 6% in 1983) (*6,8*). However, in some of these water supplies, fluoride occurs naturally at optimal levels, and the number of people served by naturally fluoridated water has remained fairly constant at approximately 10.7 million (Figure 3) (*6,7*). Excluding this portion, the estimated percent of the population on public water supplies receiving fluoridated water was 56.5% in 1983.

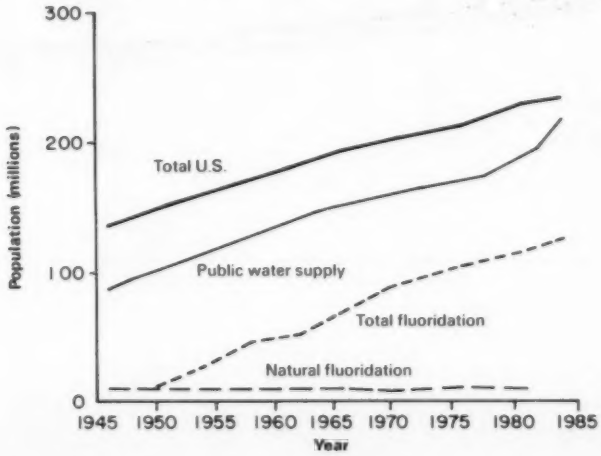
However, the number of people served by public water supplies is increasing (Figure 3). This trend can be explained by increased urbanization of the U.S. population. The population served by public water supplies varies from state to state and ranges from 29% in Oregon to 99% in Illinois and Maryland. The population served by public water supplies in Washington, D.C., is 100% (*6,8*).

Another national fluoridation and dental health objective for 1990 states: **At least 95% of the population on community water systems should be receiving the benefits of optimally fluoridated water**. Of the 60,000 public water supplies in the United States, only about 8,000 are fluoridated (*6,8*). Approximately 46,000 of these systems serve populations of under 1,000, and 150 systems serve populations of more than 100,000 (*6,8*). The public water systems of nine of the 50 largest cities in the United States are not fluoridated: Los Angeles, San Diego, and San Jose, California; Phoenix, and Tucson, Arizona; San Antonio, Texas; Portland, Oregon; Honolulu, Hawaii; and Newark, New Jersey (*9*). Past experience has shown that the length of time needed to implement fluoridation in a given community is not necessarily related to the size of the community but rather to other factors, such as how the decision to fluoridate is made (e.g., city council, referendum), and the effectiveness of public health education programs about the benefits of fluoridation.

The maintenance of the optimal level of fluoride is critical once a water system is fluoridated. It has been shown that the dental benefits from fluoridated water are significantly reduced if fluoride levels drop below the optimal concentration (*10-12*).

The results of the National Preventive Dentistry Demonstration Program conducted by The

FIGURE 3. Fluoridation growth, by population — United States, 1945-1984



Dental Caries – Continued

Robert Wood Johnson Foundation indicate that, "At an estimated cost of less than $1 per child per year, fluoridation remains society's least expensive and most effective caries preventive measure" (*13*).

Reported by Dental Disease Prevention Activity, Center for Prevention Svcs, CDC.

References

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3. National Center for Health Statistics, National Health Survey, 1971-1973. Unpublished data, 1978.
4. Galagan DJ, Vermillion JR. Determining optimum fluoride concentrations. Public Health Rep. 1957;72:491-3.
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(Continued on page 85)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	6th Week Ending			Cumulative, 6th Week Ending		
	Feb. 9, 1985	Feb. 11, 1984	Median 1980-1984	Feb. 9, 1985	Feb. 11, 1984	Median 1980-1984
Acquired Immunodeficiency Syndrome (AIDS)	97	39	N	605	387	N
Aseptic meningitis	78	91	86	387	555	510
Encephalitis: Primary (arthropod-borne & unspec.)	14	17	17	74	92	97
Post-infectious	4	1	2	10	6	7
Gonorrhea: Civilian	14,314	16,129	17,406	89,276	97,140	112,172
Military	187	410	552	1,612	2,459	3,184
Hepatitis: Type A	431	423	423	2,151	2,208	2,524
Type B	511	473	374	2,488	2,594	2,001
Non A, Non B	85	62	N	383	364	N
Unspecified	94	78	145	447	441	915
Legionellosis	12	14	N	60	45	N
Leprosy	-	10	5	10	26	26
Malaria	7	5	17	56	66	73
Measles: Total*	4	45	35	27	188	188
Indigenous	2	45	N	5	132	N
Imported	2	-	N	22	56	N
Meningococcal infections: Total	58	68	68	283	325	353
Civilian	58	68	68	283	325	349
Military	-	-	-	-	-	1
Mumps	61	70	107	260	371	506
Pertussis	17	59	19	103	176	116
Rubella (German measles)	5	9	33	21	44	170
Syphilis (Primary & Secondary): Civilian	539	614	589	2,758	3,262	3,394
Military	5	7	11	20	40	54
Toxic Shock syndrome	7	7	N	36	50	N
Tuberculosis	370	419	453	1,780	1,977	2,396
Tularemia	-	1	1	13	4	11
Typhoid fever	7	6	5	20	32	36
Typhus fever, tick-borne (RMSF)	2	1	1	4	7	7
Rabies, animal	75	84	91	339	421	517

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1985		Cum. 1985
Anthrax	-	Plague	-
Botulism: Foodborne	-	Poliomyelitis: Total	-
Infant (Tex: 1)	4	Paralytic	-
Other	-	Psittacosis (N. Mex: 2)	16
Brucellosis	4	Rabies, human	-
Cholera	-	Tetanus	3
Congen. rubella syndrome	-	Trichinosis	4
Diphtheria	-	Typhus fever, flea-borne (endemic, murine)	-
Leptospirosis	5		

*Two of the 4 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 9, 1985 and February 11, 1984 (6th Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum 1985	1985	Cum 1985	Cum 1985	Cum 1985	Cum 1984	1985	1985	1985	1985	1985	Cum 1985
UNITED STATES	605	76	74	10	89,276	97,140	431	511	65	94	12	10
NEW ENGLAND	17	2	2	-	2,548	3,156	4	43	3	14	-	-
Maine	1	-	-	-	141	128	-	-	-	-	-	-
N H	-	-	1	-	61	76	-	-	-	-	-	-
Vt.	-	-	-	-	29	43	-	-	1	-	-	-
Mass	11	-	1	-	843	1,094	3	37	-	14	-	-
R I	1	-	-	-	220	187	-	1	-	-	-	-
Conn	4	2	-	-	1,246	1,628	1	5	2	-	-	-
MID ATLANTIC	241	10	2	-	13,017	11,855	27	89	1	9	4	1
Upstate N Y	44	7	2	-	1,431	1,861	3	8	1	3	-	-
N Y City	149	1	-	-	6,128	5,316	14	40	-	3	-	1
N J	32	-	-	-	1,783	1,687	3	14	-	2	4	-
Pa	16	2	-	-	3,675	2,991	7	27	-	1	-	-
E N CENTRAL	45	6	25	2	12,773	13,984	31	58	8	5	1	-
Ohio	14	1	10	1	3,139	2,989	3	16	4	1	1	-
Ind	2	1	6	-	1,130	1,861	3	13	-	1	-	-
Ill	15	1	-	-	4,186	3,953	8	4	1	1	-	-
Mich	10	3	8	-	3,862	3,776	17	25	3	2	-	-
Wis	4	-	1	1	456	1,405	-	-	-	-	-	-
W N CENTRAL	10	-	3	-	4,979	4,452	10	10	2	2	1	-
Minn	2	-	-	-	774	627	1	4	1	-	-	-
Iowa	2	-	3	-	512	569	-	-	1	2	-	-
Mo	4	-	-	-	2,184	1,969	1	3	-	-	1	-
N Dak	-	-	-	-	26	50	-	-	-	-	-	-
S Dak	-	-	-	-	104	147	8	2	-	-	-	-
Nebr	-	-	-	-	500	340	-	1	-	-	-	-
Kans	2	-	-	-	879	750	-	-	-	-	-	-
S ATLANTIC	61	31	12	4	18,437	24,606	32	99	14	11	-	-
Del	1	-	1	-	412	428	-	-	1	-	-	-
Md	8	3	3	-	2,523	3,370	2	11	-	4	-	-
D C	11	2	-	-	1,487	1,747	-	7	-	-	-	-
Va	6	14	1	3	1,959	2,481	5	17	2	1	-	-
W Va	-	-	-	-	280	283	-	3	-	-	-	-
N C	7	3	7	-	3,620	3,955	2	5	3	1	-	-
S C	1	-	-	-	2,622	2,253	-	4	3	1	-	-
Ga	8	4	-	-	-	4,773	6	28	1	1	-	-
Fla	19	5	-	1	5,534	5,316	17	24	4	3	-	-
E S CENTRAL	8	3	2	3	7,935	8,101	7	24	2	1	-	-
Ky	3	1	-	-	780	1,016	5	7	1	-	-	-
Tenn	-	1	1	-	3,170	3,288	2	15	1	1	-	-
Ala	4	1	1	3	2,490	2,600	-	2	-	-	-	-
Miss	1	-	-	-	1,495	1,217	-	-	-	-	-	-
W S CENTRAL	38	8	4	-	13,545	13,203	83	23	4	24	-	-
Ark	-	-	-	-	1,304	1,164	1	-	-	-	-	-
La	1	-	-	-	3,084	3,159	3	3	-	-	-	-
Okla	-	-	3	-	1,411	1,508	17	4	1	4	-	-
Tex	37	8	1	-	7,746	7,372	62	16	3	20	-	-
MOUNTAIN	14	-	3	-	3,111	2,915	52	41	4	11	-	-
Mont	-	-	-	-	80	156	-	-	-	-	-	-
Idaho	-	-	-	-	115	116	1	3	-	-	-	-
Wyo	-	-	-	-	91	77	-	-	-	-	-	-
Colo	4	-	2	-	880	739	5	7	1	8	-	-
N Mex	2	-	-	-	377	369	11	10	-	1	-	-
Ariz	6	-	-	-	942	766	22	10	2	1	-	-
Utah	-	-	1	-	126	165	5	4	1	-	-	-
Nev	2	-	-	-	500	527	8	7	-	1	-	-
PACIFIC	171	16	21	1	12,931	14,868	185	124	27	17	6	9
Wash	7	2	1	-	832	949	17	14	6	-	2	-
Oreg	4	-	-	-	812	773	30	11	2	1	-	1
Calif	160	10	20	1	10,746	12,614	137	98	18	16	4	7
Alaska	-	-	-	-	327	311	1	1	1	-	-	-
Hawaii	-	4	-	-	214	221	-	-	-	-	-	1
Guam	-	U	-	-	-	39	U	U	U	U	U	-
P R	9	U	1	-	419	405	U	U	U	U	U	-
V I	-	U	-	-	39	57	U	U	U	U	U	-
Pac. Trust Terr.	-	U	-	-	-	-	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending February 9, 1985 and February 11, 1984 (6th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1985	1985	Cum. 1985	1985	Cum. 1985	Cum. 1984	Cum. 1985	1985	Cum. 1985	1985	Cum. 1985	Cum. 1984	1985	Cum. 1985	Cum. 1984
UNITED STATES	56	2	5	2	22	188	283	61	260	17	103	178	5	21	44
NEW ENGLAND	1	-	-	-	-	-	17	3	10	-	1	3	-	2	1
Maine	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1
N.H.	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
Vt.	-	-	-	-	-	-	2	-	-	-	1	1	-	-	-
Mass.	1	-	-	-	-	-	3	3	8	-	-	-	-	1	-
R.I.	-	-	-	-	-	-	6	-	-	-	-	1	-	-	-
Conn.	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-
MID. ATLANTIC	8	-	-	-	1	-	28	22	53	2	18	7	-	5	-
Upstate N.Y.	2	-	-	-	1	-	10	14	40	1	5	5	-	1	-
N.Y. City	3	-	-	-	-	-	1	-	-	1	5	-	-	3	-
N.J.	-	-	-	-	-	-	8	2	5	-	-	-	-	1	-
Pa.	3	-	-	-	-	-	9	6	8	-	8	2	-	-	-
E.N. CENTRAL	4	-	1	-	-	125	59	16	75	-	19	37	4	4	5
Ohio	1	-	-	-	-	-	21	5	36	-	8	5	-	-	-
Ind.	-	-	-	-	-	-	8	-	6	-	10	19	-	-	-
Ill.	-	-	-	-	-	16	5	6	14	-	-	5	-	-	3
Mich.	3	-	-	-	-	109	21	5	18	-	1	4	4	4	1
Wis.	-	-	1	-	-	-	4	-	1	-	-	4	-	-	1
W.N. CENTRAL	1	-	-	-	-	-	18	-	6	1	6	44	-	1	3
Minn.	-	-	-	-	-	-	5	-	-	-	1	2	-	-	-
Iowa	-	-	-	-	-	-	2	-	1	-	-	3	-	-	-
Mo.	1	-	-	-	-	-	10	-	3	1	3	1	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1
S. Dak.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
Kans.	-	-	-	-	-	-	-	-	2	-	-	36	-	1	2
S. ATLANTIC	8	-	1	1	2	-	82	4	21	5	16	24	-	1	3
Del.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Md.	1	-	-	1†	1	-	5	1	1	-	1	1	-	-	-
D.C.	1	-	-	-	1	-	2	-	-	-	-	-	-	-	-
Va.	2	-	-	-	-	-	7	1	6	-	-	4	-	-	-
W. Va.	1	-	-	-	-	-	3	-	6	-	-	2	-	-	-
N.C.	1	-	-	-	-	-	11	1	1	-	4	7	-	-	-
S.C.	-	-	-	-	-	-	5	-	1	-	-	1	-	1	-
Ga.	-	-	-	-	-	-	8	-	2	2	3	3	-	-	1
Fla.	2	-	1	-	-	-	10	1	4	3	8	6	-	-	2
E.S. CENTRAL	2	-	-	-	-	2	16	-	1	1	3	2	-	1	-
Ky.	-	-	-	-	-	-	2	-	-	1	1	1	-	1	-
Tenn.	-	-	-	-	-	2	8	-	1	-	1	1	-	-	-
Ala.	2	-	-	-	-	-	5	-	-	-	1	-	-	-	-
Miss.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
W.S. CENTRAL	3	-	-	-	-	28	20	3	19	2	9	14	-	1	4
Ark.	-	-	-	-	-	-	-	-	1	-	5	8	-	1	1
La.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Okla.	-	-	-	-	-	-	3	N	N	2	4	2	-	-	-
Tex.	3	-	-	-	-	28	16	3	18	-	-	4	-	-	3
MOUNTAIN	-	-	-	-	8	19	18	2	27	1	4	29	-	-	3
Mont.	-	-	-	-	8	-	2	1	2	-	-	14	-	-	-
Idaho	-	-	-	-	-	-	-	-	2	-	-	1	-	-	1
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	-	-	-	-	4	1	5	1	2	11	-	-	-
N. Mex.	-	-	-	-	-	1	4	N	N	-	1	2	-	-	-
Ariz.	-	-	-	-	-	-	3	-	16	-	1	-	-	-	-
Utah	-	-	-	-	-	18	4	-	-	-	-	1	-	-	2
Nev.	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-
PACIFIC	29	2	3	1	11	14	55	11	48	5	27	16	1	6	25
Wash.	4	-	-	-	-	2	7	-	2	1	2	6	-	-	-
Oreg.	1	-	-	-	-	-	5	N	N	-	4	4	-	-	-
Calif.	22	1	2	1†	10	10	43	9	39	4	19	6	1	6	24
Alaska	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Hawaii	1	1	1	-	1	2	-	2	6	-	2	-	-	-	1
Guam	-	U	-	U	-	14	-	U	-	U	-	-	U	-	1
P.R.	-	U	15	U	-	-	8	U	11	U	1	-	U	2	1
V.I.	-	U	2	U	-	-	-	U	1	U	-	-	U	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending February 9, 1985 and February 11, 1984 (6th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum 1985	Cum 1984	1985	Cum 1985	Cum 1984	Cum 1985	Cum 1985	Cum 1985	Cum 1985
UNITED STATES	2,758	3,262	7	1,780	1,977	13	20	4	339
NEW ENGLAND	54	79	1	62	59	-	2	-	-
Maine	2	1	-	2	4	-	-	-	-
N H	-	-	-	-	5	-	-	-	-
Vt	-	-	-	-	-	-	-	-	-
Mass	26	48	1	40	24	-	1	-	-
R I	1	4	-	6	10	-	-	-	-
Conn	25	26	-	14	16	-	1	-	-
MID ATLANTIC	376	414	1	418	388	-	5	-	63
Upstate N Y	16	37	-	44	58	-	3	-	10
N Y City	238	240	-	203	153	-	-	-	-
N J	71	85	1	56	84	-	1	-	-
Pa	51	52	-	115	93	-	1	-	53
E N CENTRAL	144	182	1	222	251	-	1	1	5
Ohio	12	31	-	40	64	-	-	1	1
Ind	10	29	-	26	26	-	1	-	-
Ill	83	81	1	102	95	-	-	-	1
Mich	32	29	-	43	53	-	-	-	-
Wis	7	12	-	11	13	-	-	-	3
W N CENTRAL	30	57	1	36	51	4	2	-	64
Minn	14	12	1	6	8	-	2	-	7
Iowa	-	4	-	12	9	-	-	-	18
Mo	9	33	-	11	20	3	-	-	5
N Dak	-	-	-	-	2	-	-	-	5
S Dak	1	-	-	2	1	-	-	-	25
Nebr	1	3	-	2	6	1	-	-	4
Kans	5	5	-	3	5	-	-	-	-
S ATLANTIC	717	991	-	338	443	3	4	1	38
Del	4	-	-	3	6	-	-	-	-
Md	60	52	-	43	62	-	1	-	-
D C	35	31	-	18	9	-	-	-	-
Va	38	55	-	11	31	-	1	-	12
W Va	-	5	-	13	17	-	-	-	-
N C	77	93	-	27	69	3	-	1	-
S C	94	93	-	45	64	-	-	-	2
Ga	-	175	-	45	54	-	-	-	12
Fla	409	487	-	133	131	-	2	-	12
E S CENTRAL	261	224	-	153	177	1	-	2	19
Ky	9	10	-	31	40	-	-	-	2
Tenn	62	52	-	40	57	1	-	1	1
Ala	108	76	-	66	69	-	-	1	16
Miss	82	86	-	16	11	-	-	-	-
W S CENTRAL	632	751	1	151	147	1	-	-	61
Ark	37	25	-	7	6	-	-	-	7
La	130	178	-	41	26	-	-	-	3
Okla	26	22	1	17	12	1	-	-	7
Tex	439	526	-	86	103	-	-	-	44
MOUNTAIN	103	70	1	25	31	3	-	-	42
Mont	-	-	-	2	1	-	-	-	15
Idaho	2	3	-	-	1	-	-	-	-
Wyo	3	1	-	1	-	-	-	-	2
Colo	25	10	-	-	-	-	-	-	-
N Mex	7	8	-	4	9	1	-	-	1
Ariz	61	27	1	15	17	-	-	-	24
Utah	1	3	-	-	2	2	-	-	-
Nev	4	18	-	3	1	-	-	-	-
PACIFIC	441	494	1	375	430	1	6	-	47
Wash	-	21	1	7	19	-	-	-	-
Oreg	19	13	-	12	17	1	-	-	-
Calif	414	447	-	321	357	-	6	-	47
Alaska	-	-	-	18	8	-	-	-	-
Hawaii	8	13	-	17	29	-	-	-	-
Guam	-	-	U	-	-	-	-	-	-
P R	105	126	U	16	27	-	1	-	1
V I	-	2	U	-	-	-	-	-	-
Pac. Trust Terr	-	-	U	-	-	-	-	-	-

U Unavailable

TABLE IV. Death in 121 U.S. cities,* week ending February 9, 1985 (6th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	818	583	170	31	16	18	99
Boston, Mass.	223	142	54	12	7	8	20
Bridgeport, Conn.	41	23	12	4	2	-	6
Cambridge, Mass.	30	27	3	-	-	-	7
Fall River, Mass.	33	24	8	1	-	-	2
Hartford, Conn.	41	28	11	1	-	1	5
Lowell, Mass.	39	29	8	-	1	1	3
Lynn, Mass.	18	15	3	-	-	-	2
New Bedford, Mass.	25	23	2	-	-	-	2
New Haven, Conn.	44	29	9	4	2	1	2
Providence, R.I.	107	77	23	1	2	4	16
Somerville, Mass.	10	6	3	1	-	-	1
Springfield, Mass.	66	51	10	3	-	2	4
Waterbury, Conn.	36	26	10	-	-	-	6
Worcester, Mass.	105	83	15	4	2	1	23
MID. ATLANTIC	2,707	1,851	553	194	59	50	181
Albany, N.Y.	64	42	14	3	2	3	1
Allentown, Pa.	13	12	1	-	-	-	-
Buffalo, N.Y.	135	98	24	8	2	3	21
Camden, N.J.	45	34	7	2	1	1	1
Elizabeth, N.J.	33	23	8	2	-	-	3
Erie, Pa.†	53	36	11	4	2	-	7
Jersey City, N.J.	67	27	18	14	8	-	3
N.Y. City, N.Y.	1,559	1,067	310	123	33	26	106
Newark, N.J.	75	43	15	13	2	2	6
Paterson, N.J.	45	39	4	2	-	-	6
Philadelphia, Pa.†	122	74	29	7	2	10	7
Pittsburgh, Pa.†	63	37	22	2	1	1	2
Reading, Pa.	35	27	5	-	3	-	2
Rochester, N.Y.	130	95	28	5	1	1	5
Schenectady, N.Y.	24	20	3	1	-	-	1
Scranton, Pa.†	29	19	10	-	-	-	1
Syracuse, N.Y.	97	71	21	1	2	2	2
Trenton, N.J.	59	38	16	4	-	1	1
Utica, N.Y.	15	13	2	-	-	-	-
Yonkers, N.Y.	44	36	5	3	-	-	6
E.N. CENTRAL	2,451	1,761	399	141	62	87	123
Akron, Ohio	66	46	11	5	3	1	4
Canton, Ohio	52	34	15	3	-	-	4
Chicago, Ill. §	555	460	11	28	16	39	17
Cincinnati, Ohio	119	84	25	3	2	5	15
Cleveland, Ohio	196	132	43	13	4	4	6
Columbus, Ohio	131	86	26	11	5	3	7
Dayton, Ohio	168	113	42	4	4	5	2
Detroit, Mich.	297	177	67	31	10	12	9
Evansville, Ind.	58	41	11	4	-	2	1
Fort Wayne, Ind. §	60	57	-	1	1	1	2
Gary, Ind.	19	13	4	1	1	-	-
Grand Rapids, Mich.	51	42	8	-	-	1	4
Indianapolis, Ind.	185	118	42	9	9	7	3
Madison, Wis.	38	24	8	3	1	-	7
Milwaukee, Wis.	146	110	24	9	2	1	9
Peoria, Ill.	38	23	10	4	-	1	1
Rockford, Ill.	52	41	6	3	1	1	12
South Bend, Ind.	61	43	12	3	1	2	5
Toledo, Ohio	97	67	22	4	2	2	11
Youngstown, Ohio	64	50	12	2	-	-	4
W.N. CENTRAL	848	629	138	34	22	25	52
Des Moines, Iowa	56	44	8	4	-	-	10
Duluth, Minn.	54	36	8	1	3	6	3
Kansas City, Kans.	46	28	11	-	5	2	-
Kansas City, Mo.	125	83	31	5	1	5	8
Lincoln, Nebr.	40	35	5	-	-	-	2
Minneapolis, Minn.	110	72	20	10	6	2	5
Omaha, Nebr.	105	80	14	5	3	3	13
St. Louis, Mo.	184	150	20	5	2	7	6
St. Paul, Minn.	89	70	15	3	1	-	1
Wichita, Kans.	39	31	6	1	1	-	4
S. ATLANTIC	1,215	801	234	85	41	49	54
Atlanta, Ga.	132	74	33	13	4	8	2
Baltimore, Md.	221	132	52	18	10	9	5
Charlotte, N.C.	73	45	19	2	4	3	5
Jacksonville, Fla.	115	75	26	4	6	4	10
Miami, Fla.	153	92	34	16	8	3	4
Norfolk, Va.	43	22	12	4	3	2	4
Richmond, Va.	91	61	13	8	-	9	3
Savannah, Ga.	25	18	3	1	1	2	1
St. Petersburg, Fla.	146	121	18	4	2	1	9
Tampa, Fla.	75	45	13	8	1	3	5
Washington, D.C. §	90	79	1	4	1	5	2
Wilmington, Del.	51	37	10	3	1	-	4
E.S. CENTRAL	980	648	222	61	24	24	69
Birmingham, Ala.	107	72	25	7	1	2	3
Chattanooga, Tenn.	79	57	15	1	2	4	5
Knoxville, Tenn.	114	71	25	12	1	5	5
Louisville, Ky.	88	67	17	2	-	2	8
Memphis, Tenn.	350	220	85	26	14	4	31
Mobile, Ala.	79	50	20	6	2	1	4
Montgomery, Ala.	36	21	11	1	1	2	4
Nashville, Tenn.	127	90	24	6	3	4	9
W.S. CENTRAL	1,231	771	289	90	32	49	84
Austin, Tex.	74	51	12	6	3	2	11
Baton Rouge, La.	33	20	10	-	-	3	1
Corpus Christi, Tex.	43	24	9	5	2	3	-
Dallas, Tex.	186	112	42	18	6	8	13
El Paso, Tex.	75	49	16	7	3	-	6
Fort Worth, Tex.	105	69	30	3	1	2	9
Houston, Tex.	160	74	44	20	8	14	7
Little Rock, Ark.	74	43	20	2	4	5	7
New Orleans, La.	137	90	35	7	2	3	2
San Antonio, Tex.	200	143	39	11	2	5	21
Shreveport, La.	51	35	8	7	-	1	3
Tulsa, Okla.	93	61	24	4	1	3	4
MOUNTAIN	716	470	152	46	18	29	55
Albuquerque, N.Mex.	124	79	24	12	2	6	9
Colo. Springs, Colo.	37	29	2	4	2	-	6
Denver, Colo.	126	81	24	10	4	7	8
Las Vegas, Nev.	86	47	27	5	1	6	7
Ogden, Utah	30	21	7	1	1	-	5
Phoenix, Ariz.	139	88	35	7	5	4	6
Pueblo, Colo.	29	24	3	1	-	1	4
Salt Lake City, Utah	46	24	13	4	2	3	2
Tucson, Ariz.	99	77	17	2	1	2	8
PACIFIC	2,275	1,733	312	118	47	62	193
Berkeley, Calif.	23	17	3	3	-	-	1
Fresno, Calif.	98	57	25	9	1	6	19
Glendale, Calif. §	31	31	-	-	-	-	-
Honolulu, Hawaii	72	55	13	3	-	1	8
Long Beach, Calif.	133	97	22	5	5	4	10
Los Angeles, Calif. §	558	515	7	5	16	12	21
Oakland, Calif.	94	62	22	8	2	-	8
Pasadena, Calif.	47	34	6	1	3	3	2
Portland, Oreg.	131	95	25	5	3	3	9
Sacramento, Calif.	169	125	28	6	3	7	20
San Diego, Calif.	194	136	37	10	5	6	33
San Francisco, Calif.	215	147	33	27	2	6	9
San Jose, Calif.	222	160	40	12	3	7	35
Seattle, Wash.	147	99	28	15	4	1	7
Spokane, Wash.	45	31	9	1	-	4	5
Tacoma, Wash.	96	72	14	8	-	2	6
TOTAL	13,241††	9,247	2,469	800	321	393	910

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza.

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not [illegible] Figures are estimates based on average of past 4 weeks.

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1983*†	Estimated mortality September 1984		Estimated number of physician contacts September 1984*¶
		Number*§	Annual Rate/100,000*§	
ALL CAUSES (TOTAL)	9,170,000	161,050	828.5	103,600,000
Accidents and adverse effects (E800-E949)	2,219,000	8,090	41.6	5,700,000
Malignant neoplasms (140-208)	1,808,000	37,050	190.6	1,200,000
Diseases of heart (390-398, 402, 404-429)	1,559,000	58,260	299.7	5,000,000
Suicides, homicides (E950-E978)	1,218,000	3,890	20.0	—
Chronic liver disease and cirrhosis (571)	248,000	2,120	10.9	100,000
Cerebrovascular diseases (430-438)	226,000	11,760	60.5	700,000
Congenital anomalies (740-759)	134,000	1,280	6.6	400,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	123,000	5,070	26.1	1,300,000
Diabetes mellitus (250)	115,000	2,900	14.9	2,700,000
Pneumonia and influenza (480-487)	106,000	3,770	19.4	500,000
Prenatal care*				3,100,000
Infant mortality*††		3,100	9.8 /1,000 live births	

*For details of calculation, see footnotes for Table V, *MMWR* 1985;34:2.

†Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 32, No. 13, September 21, 1984.

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¶IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, September 1984, Section III.

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Dental Caries — Continued

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Current Trends

Tuberculosis — United States, 1984

In 1984, a provisional total of 21,701 tuberculosis cases was reported to CDC, a 9.0% decline from the 1983 final total of 23,846 cases. Similarly, in 1984 the provisional incidence rate was 9.2 cases per 100,000 population, a decline of 9.8% from the 1983 final rate of 10.2/10,000 (Figure 4).

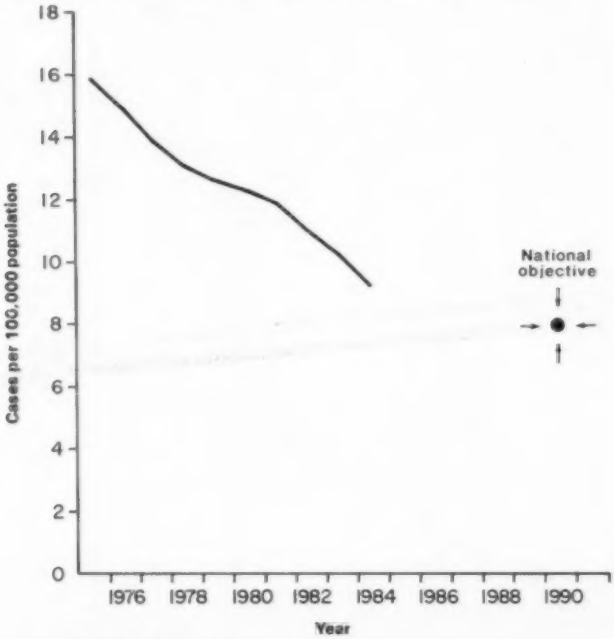
Final mortality data recently released by the National Center for Health Statistics indicate that, in 1982, there were 1,807 tuberculosis deaths, a decline of 6.7% from the 1,937 deaths reported in 1981.

Reported by Div of Tuberculosis Control, Center for Prevention Svcs, CDC.

Editorial Note: From 1975 through 1978, the average annual decrease in the tuberculosis incidence rate was 6.3% (Figure 4). From 1978 through 1981, when there was a large influx of Southeast Asian refugees, the average annual decline was only 3.2%. A 7.6% decrease in 1982, a 7.3% decrease in 1983, and the provisional 9.8% decrease in 1984 indicate that the previous downward trend has resumed.

Three factors may have contributed to the decreased incidence of tuberculosis: (1) a decline in the number of indigenous tuberculosis cases; (2) a decline in the number of refugees

FIGURE 4. Reported tuberculosis rate — United States, 1975-1984*



*1984 rate provisional.

Tuberculosis – Continued

with tuberculosis arriving in the United States (since 1983, Indochinese refugees with tuberculosis have been completing supervised, directly observed chemotherapy in Southeast Asia before coming to the United States); and (3) an increase in the number of states using the new national individual case reporting system, which requires more accurate verification of cases before they are counted.

In 1980, the number of tuberculosis deaths declined by 1.4%, and in 1981, by 2.1%. The decline of 6.7% in 1982 is encouraging.

The decline in the tuberculosis incidence rate indicates continuing progress toward the 1990 national prevention objective of an annual reported incidence of eight cases per 100,000 population (Figure 4) (*1*). Intensification of tuberculosis control efforts using existing technology and program strategies (*2,3*) should be able to accelerate this downward trend. If new tools for tuberculosis control, which are more effective, more efficient, and easier to implement, can be developed, tuberculosis elimination in the United States can become a reality.

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Epidemiologic Notes and Reports

Update: Influenza Activity — United States

Influenza activity continued to increase throughout January and into February 1985. For the week ending February 9, 10 states (Alabama, Nebraska, New Hampshire, New Mexico, Oklahoma, Pennsylvania, South Dakota, Texas, Virginia, and Washington) and the District of Columbia reported widespread outbreaks of influenza-like illness, and 14 states reported regional outbreaks. Family physicians who report weekly to CDC noted an average of 11 cases of influenza-like illness for the week ending January 30, compared with the average of 6.6 cases at the beginning of January.

Of total deaths reported from 121 U.S. cities, the proportion associated with pneumonia and influenza (P&I) has increased from about 5% at the beginning of January to 6.9% for the week ending February 9. P&I deaths most recently exceeded 6% in 1980-1981, when many type A(H3N2) virus outbreaks occurred, and P&I deaths peaked at 6.9%.

A total of 491 type A(H3N2) isolates have been reported to CDC through the week ending February 1 from the network of WHO collaborating laboratories in the United States, compared with 44 isolates reported through December 28, 1984. Including recent reports from Indiana, Kansas, and Virginia, influenza type A(H3N2) isolates have been reported from 42 states this season. Type B isolates have been reported infrequently this season, accounting for only five of the 496 isolates reported by the collaborating laboratories.

Reported by E Balkovic, PhD, Veterans Administration Hospital, New Haven, Connecticut; F Hayden, MD, University of Virginia Hospital, Charlottesville; Participating physicians of the American Academy of Family Physicians; State and Territorial Epidemiologists; State Laboratory Directors; Other collaborating

Influenza – Continued

laboratories; Statistical Svcs Br, Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The data from the indicators of influenza activity indicate that U.S. influenza outbreaks are now having a significant impact on illness and death. These indicators are statistical indices of actual numbers of cases and cannot be used to reliably extrapolate the numerical incidence of influenza.

Erratum: Vol. 34, No. 4

p. 49. In the article, "Prevalence of Cytomegalovirus Excretion from Children in Day-Care Centers—Alabama," the total mouth swabs for center A in Table 1 should be 14/61 (23%); for center B, the total percent should be 16%.

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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